

PREVENTION OF HEARING LOSS



CPT SCOTT FORBES

***AUDIOLOGIST & HEARING CONSERVATION
PROGRAM MANAGER***

PURPOSE

**Inform Soldiers of the
Potential Hazards of Noise
and the Individual
Countermeasures
Necessary to Protect
Against Hearing Injury**



BACKGROUND

- **Noise is the most prevalent occupational hazard to Soldiers**
- **The detrimental effects of hearing injury are often overlooked or under-estimated**
- **Noise induced hearing injury is PREVENTABLE**



Hearing Loss is Funnv.....Riaht?



"Yes! That was very loud Mr. Trainer,
but I said I wanted to hear your *HEART!*"

Unless...



What
?

Wher
e?

Huh?

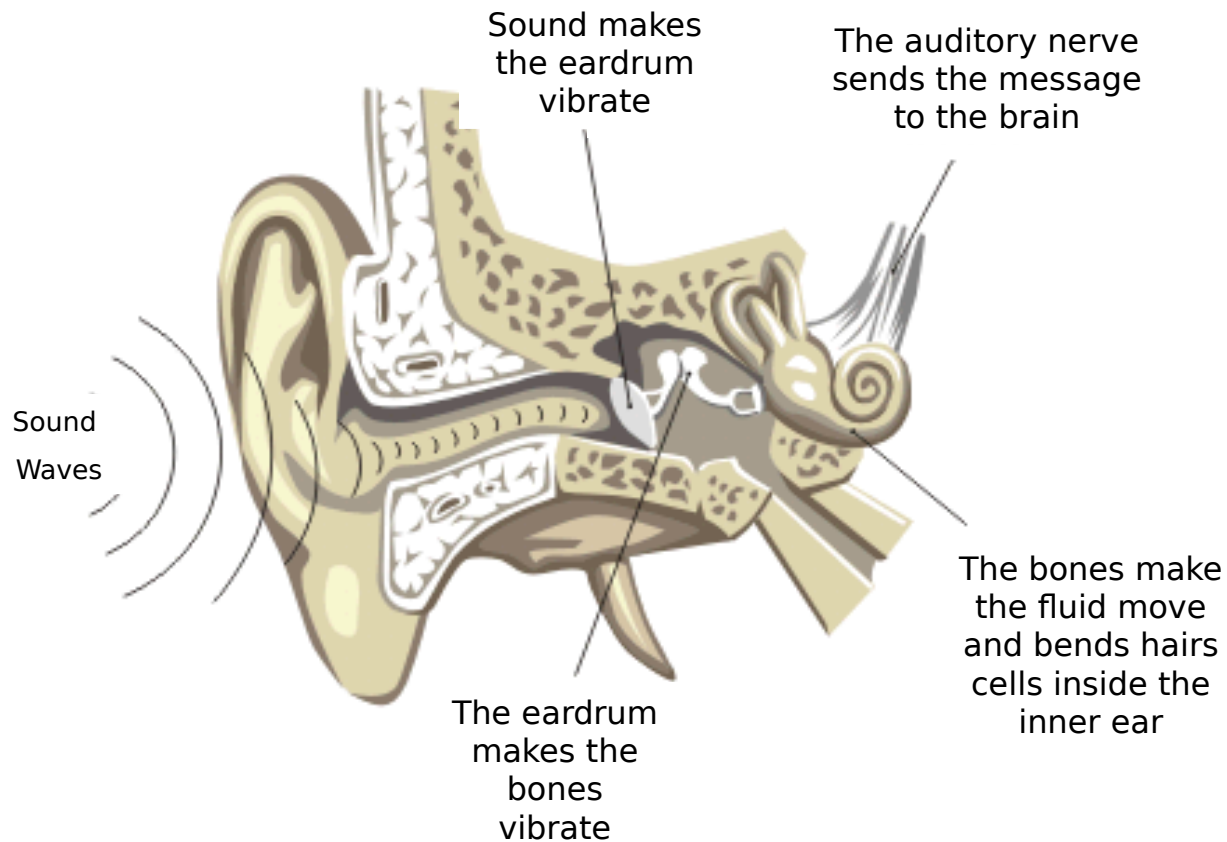
Three
o'clock

“After 20 years of service...only one regret.”

***SGM Kevin M. Skelly
NCO Journal, Fall '95***

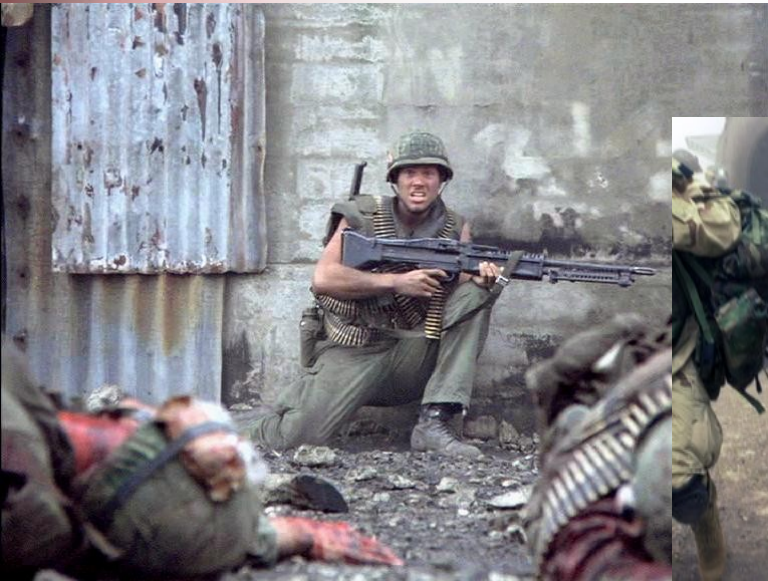


How We Hear

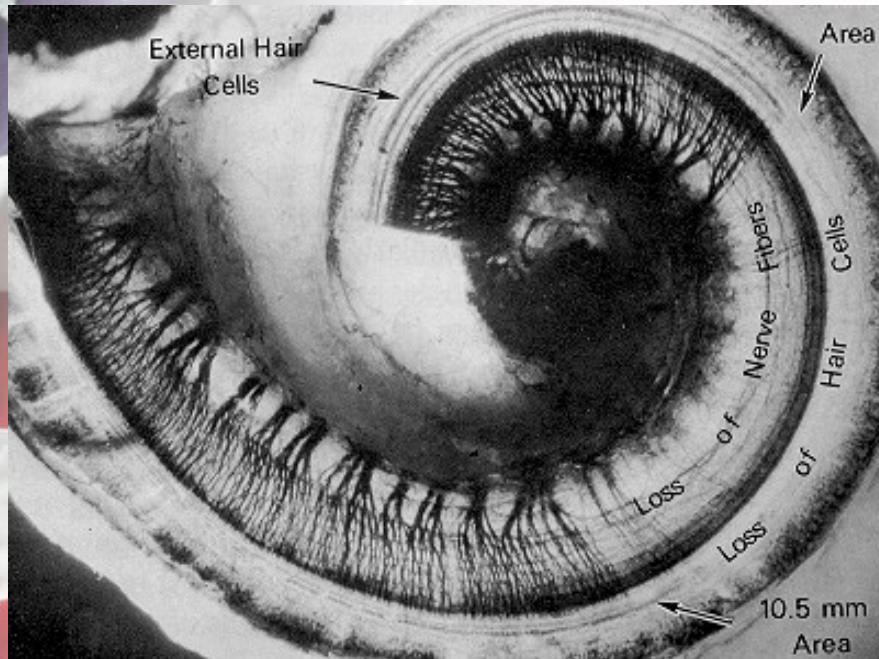


Types of Noise

- **Steady State Noise**
- **Impulse Noise**



HOW NIHL OCCURS



- Routine exposure to moderately loud steady-state noise
- One time or repeated exposure to very loud impulse noise... referred to as acoustic trauma

HOW DO WE KNOW IF NOISE IS TOO LOUD?



Stephen Hird - Pool / AP

- Measure noise with a sound level meter
- 3 Foot Rule - If you have to raise your voice to be heard by someone standing within 3 feet (arm's length), then the level is most likely hazardous

The background of the slide is a faded American flag, with the stars and stripes visible. The title is centered at the top in a large, bold, blue font, underlined.

Noise Induced Hearing Injury

- Most often permanent to some degree
- Affects high pitch sounds first
- Affects communication ability
- Degrades quality of life
- "Ringing in Ears" – tinnitus

Why Do Soldiers Need Good Hearing?

SURVIVABILITY!

Lethality!

- **Our ability to detect the enemy keeps us alive**
- **Our ability to communicate effectively makes us lethal!**

The background of the slide is a close-up, slightly blurred image of the American flag, showing the stars and stripes. The stars are white on a blue field, and the stripes are red and white.

How We Use Our Hearing

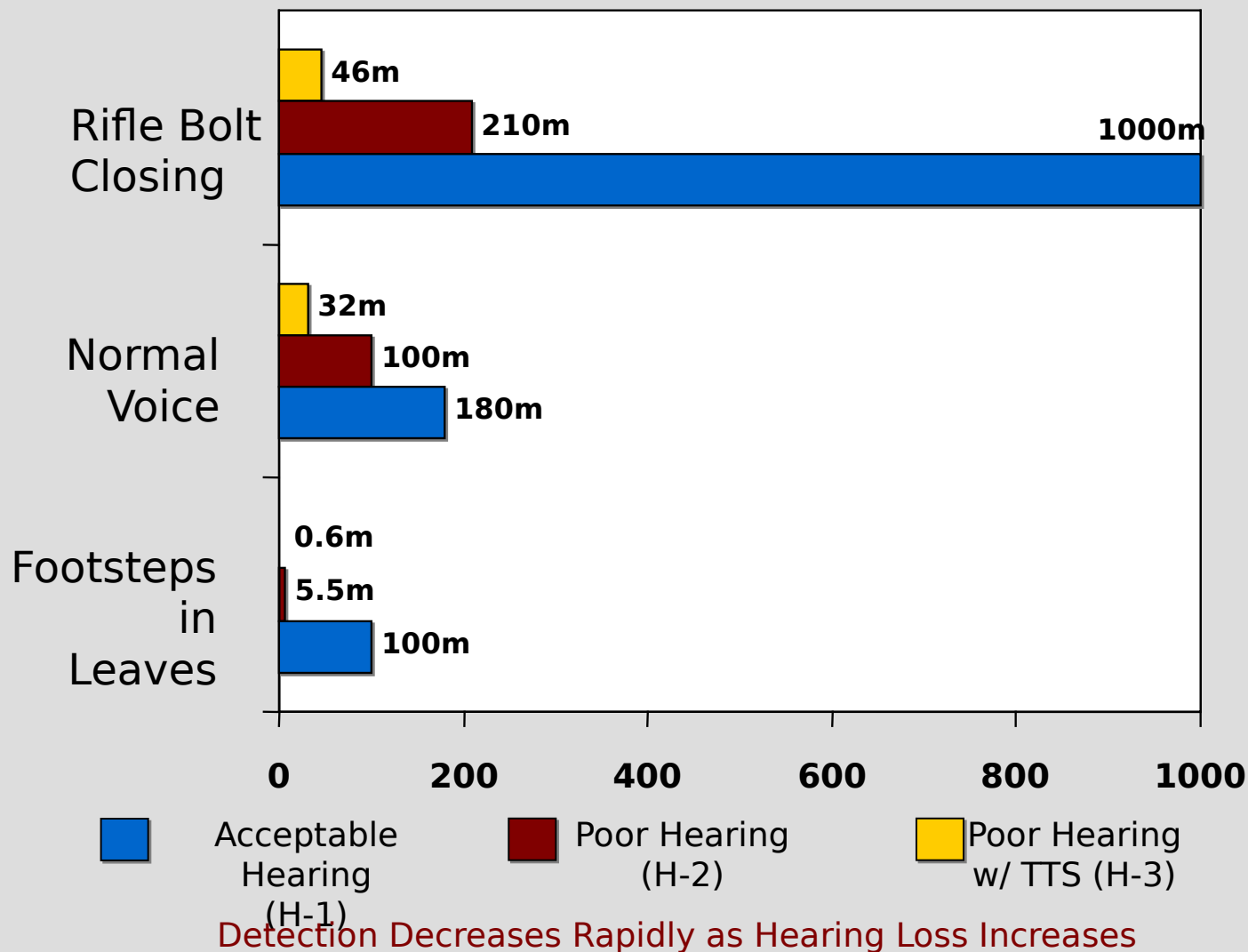
- Hear Enemy Movement
- Friend or Foe Sounds
 - M-16 or AK47 (they sound different)
- Radio Communications
- Sounds of booby traps (trip wire, pressure activated devices)
- Distance to Detection

The background of the slide is a stylized American flag, with the stars and stripes visible. The title is overlaid on the top left portion of the flag.

Hearing and Survivability

- We can HEAR the enemy long before we see the enemy!
- We can hear:
 - In the darkness
 - 360 degrees
 - 24/7

Distance To Detection



NEW YORK TIMES BESTSELLER

MARK BOWDEN

BLACK HAWK DOWN



A STORY OF MODERN WAR

"Shortly after moonrise, Howe was startled by loud voices... over where Stebbins and Heard had been hit... He popped an earplug and listened harder. The voices were speaking Somali. They must have been half deaf like everyone else from all the explosions, and didn't realize how loud they were talking. Sometimes it took soldiers two or three days to regain full hearing after a fight."

Battle of the Black Sea

Mogadishu, Somalia

Delta Force, SFC Paul Howe

Communication In Combat



SFC Paul R. Smith

Garinther & Peters Tank Crew Study

<i>COMMUNICATION CONDITION</i>	<i>GOOD</i>	<i>POOR</i>
Targets Killed	94%	41%
Mission Time	6 sec	40 sec
Gunner Accuracy	90%	42%
Targets Killed	94%	41%
Crew Killed	7%	28%
Wrong Target Engaged	0%	8%





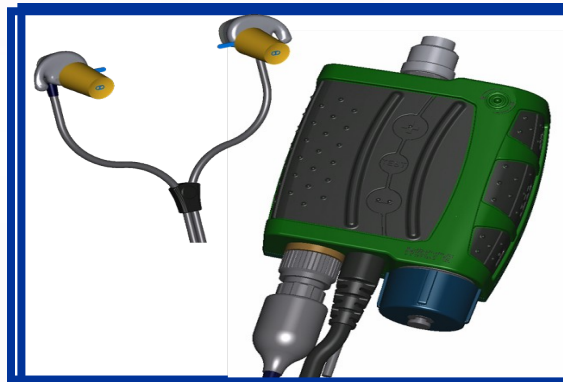
HEARING PROTECTION

- The only thing standing between you and permanent hearing loss!!!!



Approved Types of HPD's

- Earplugs
 - Pre-formed
 - Hand-formed
- Noise Muffs
- Helmets
- Enhanced Communication Devices

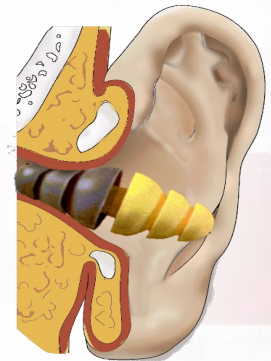


COMBAT ARMS

EARPLUGS



- Insert **YELLOW** plugs for weapons fire in dismounted
- Insert **OLIVE DRAB** plugs for steady state noise in and around aircraft, noisy vehicles
- Keep filter holes free of earwax and other debris.



- Check proper insertion for slight tension by gently tugging on plugs.

- Ensure that plugs are cleaned with soap and

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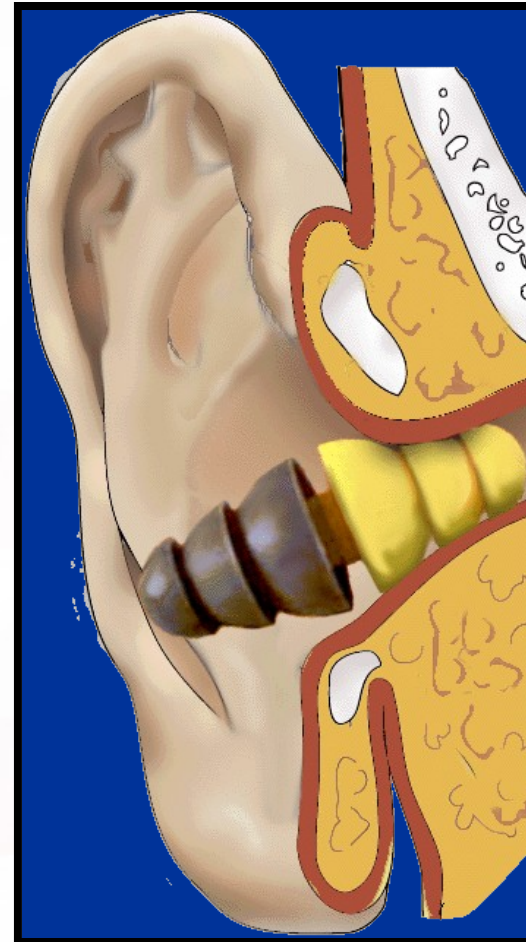
But I Can't Wear Hearing Protection Because...

- **My ears will become infected**
- **They hurt my ears**
- **I can't hear with them in my ears**
- **I am such a finely tuned soldiering machine that even the slightest degradation of my hearing acuity means certain failure in my hunt for al-Qaeda operatives.**

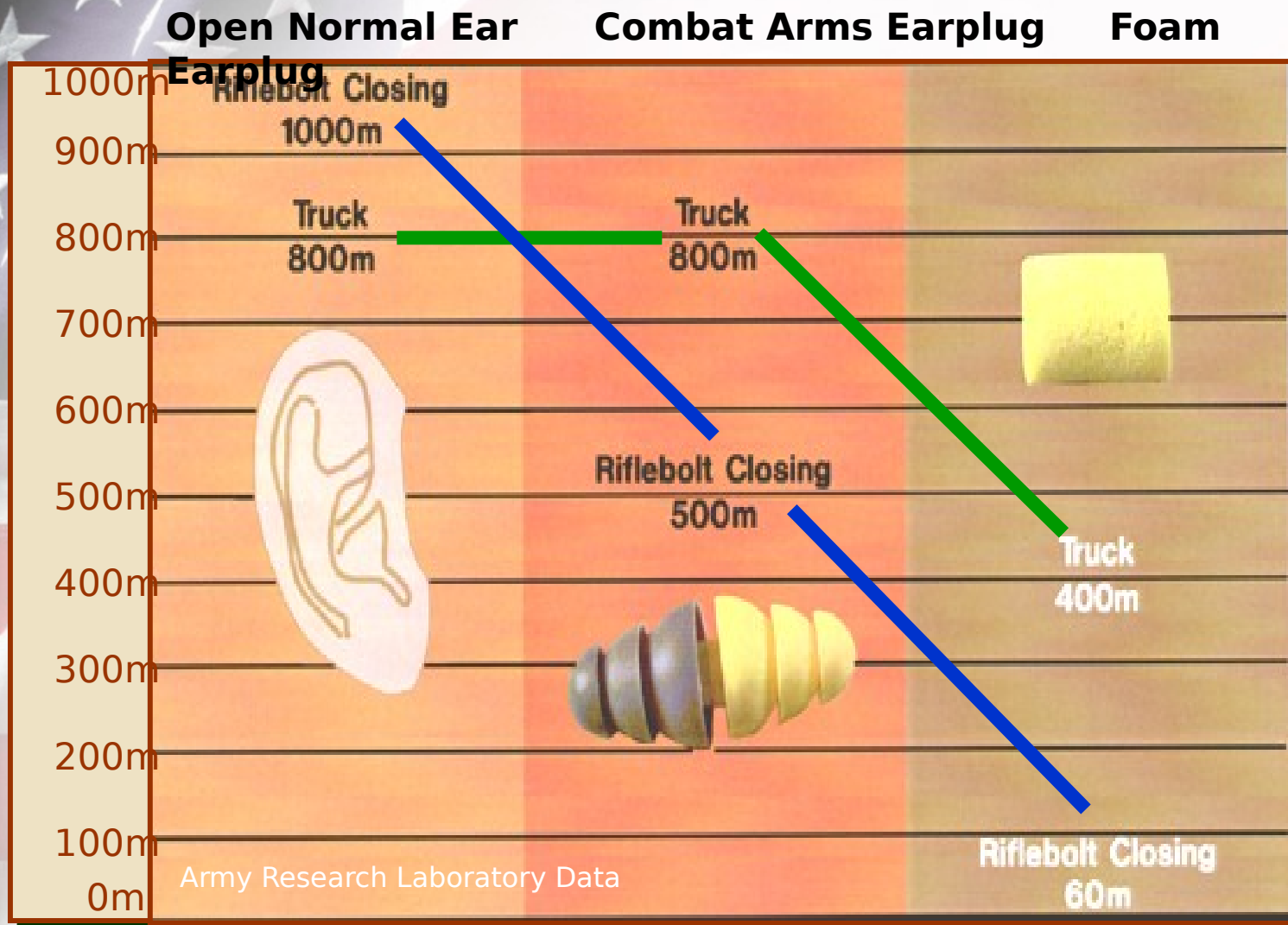
Characteristics Of A Good Earplug Fit

- **Voices sound muffled**
- **“Vacuum” effect**
 - except for the CAE
- **Comfortable**

**An earplug used
incorrectly will NOT
protect your hearing**



Detection of Sound By...



COUNTERMEASURES

- Wear your hearing protection
- Annual Hearing Exam
- Annual hearing health education and HPD check
- Limit noise exposure as much as possible

TEST RESULTS

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TO SUMMARIZE.....

Noise induced hearing injury is almost always preventable

Good hearing equates to increased survivability and lethality

Hearing protection devices make you more combat effective, not less.

Protect yourself at work and home

If YOU don't protect it YOU will lose it



**Contact The Hearing
Conservation Office for
Additional Information**

(502) 624-0584